WLB5254USB

54Mbps Wireless LAN USB Adapter

User's Guide

ZIO®
Millennium Network Frontier

SDTUM-151(Rev: 02, 06, 06, 08)

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Chapter 1 Introduction

1.1 Welcome

ZIO WLB5254USB Wireless USB Adapter is a powerful 32-bit USB Adapter that installs quickly and easily into PCs. The Adapter can be used in Ad-Hoc mode to connect directly with other cards for peer-to-peer file sharing or in Infrastructure mode to connect with a wireless access point or router for access to the Internet in your office or home network.
The Wireless USB Adapter connects you with 802.11g networks at up to an incredible 54Mbps and for added versatility, it can also interoperate with all the up to 11Mbps 802.11b products found in homes, businesses, and public wireless hotspots around the country. And in either mode, your wireless communications are protected by industrial-strength WPA, so your data stays secure.

1.2 About This Guide

This User Manual contains information on how to install and configure your Wireless Adapter to get your network started accessing the Internet. It will guide you through the correct configuration steps to get your device up and running.

1.3 Copyright statement

No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, whether electronic, mechanical, photocopying, recording, or otherwise without the prior writing of the publisher.

1.4 Contents of Package

- Wireless network USB adapter
- Manual, Drivers and Utility on CD
- Quick Installation Guide

If any of the above items are missing, please contact your reseller.

1.5 Before you begin

You must have at least the following:

- A laptop computer/desktop PC with an available USB port
- At least a 300MHz processor and 32MB of memory
- Windows 98SE, ME, 2000, XP
- A CD-ROM Drive
- USB controller properly installed and working in the laptop computer
- A 802.11g or 802.11b Access Point (for infrastructure Mode) or another 802.11g or 802.11b wireless adapter (for Ad-Hoc; Peer-to-Peer networking mode.)

Chapter 2 Designing Your Wireless Network

The wireless USB Adapter supports up to 54 Mbps connections. This card is fully compliant with the specifications defined in IEEE802.11g standard. It is designed to complement USB Local Bus computers and supports Windows 98SE/Me/2000/XP.

The status LED indicators of the USB wireless adapter are described in the following.

- Lnk/Act ON (Green): Indicates a valid connection
- Lnk/Act Flashing: Indicates the Adapter is transmitting or receiving data.

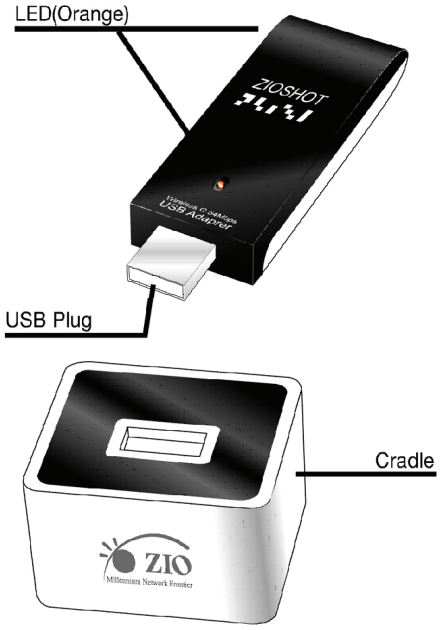

Figure 2-1

Chapter 3 Install Wireless Adapter

3.1 Install Driver and Utility

- Insert the Driver and Utility CD-ROM into the CD-ROM driver.
- The Wizard should run automatically, and Figure 3-1 should appear. If it dose not, click the **Start** button and choose **Run**. In the field that appears, enter D:\autorun.exe (if ''D'' is the letter of your CD-ROM drive).

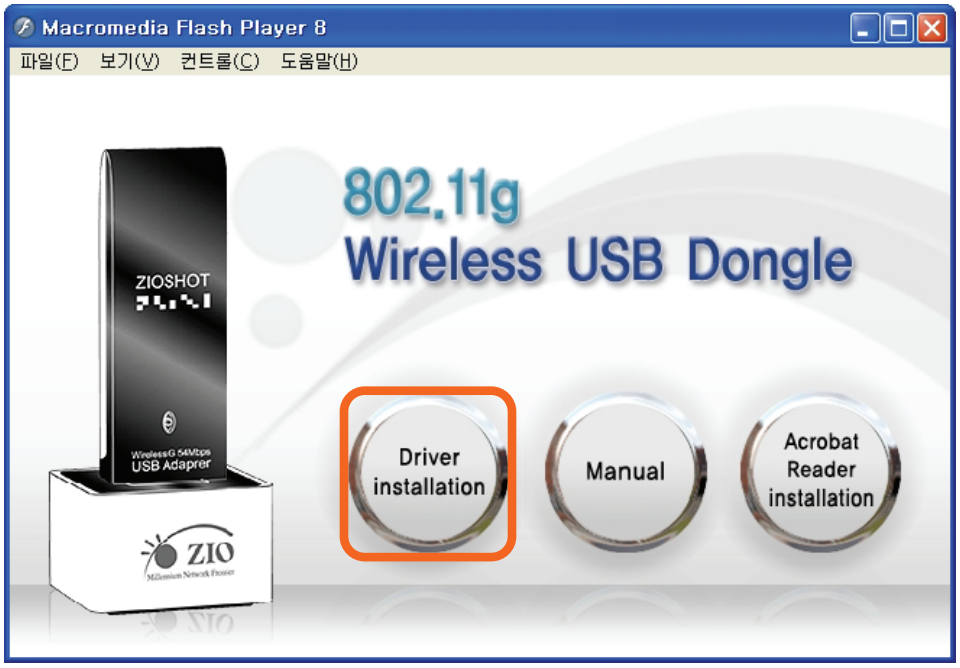

Figure 3-1

- Click **Driver installation** on the Wireless Client Configuration Utility screen.

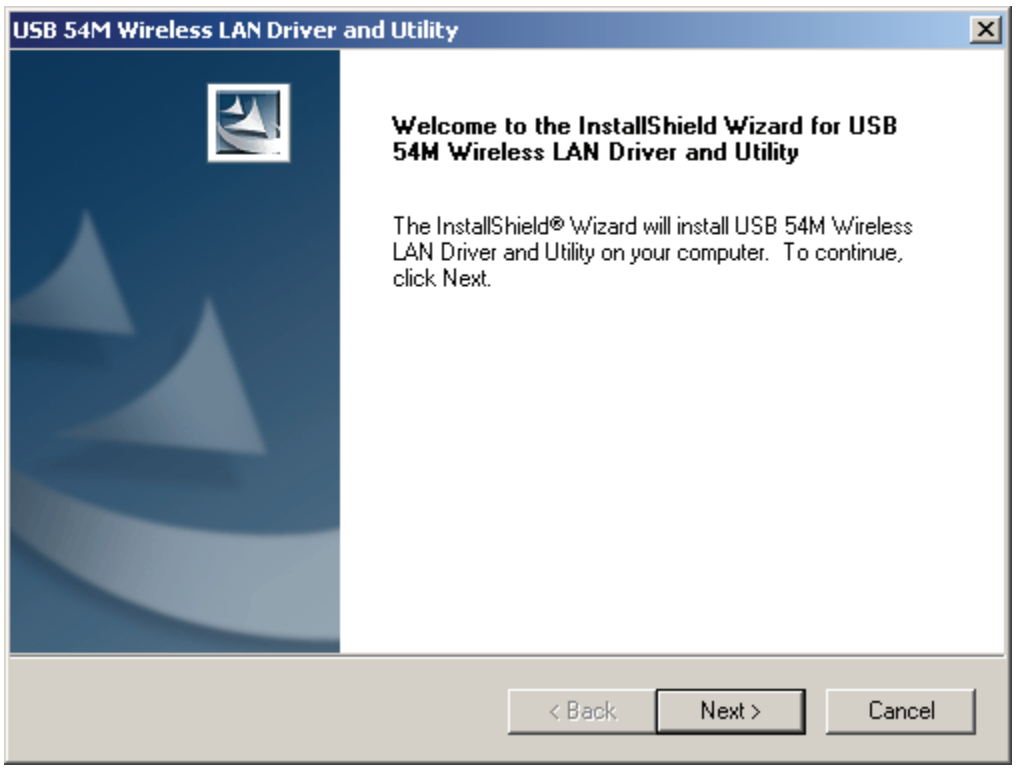
USB 54M Wireless LAN Driver and Utility
Welcome to the InstallShield Wizard for USB 54M Wireless LAN Driver and Utility
The InstallShield® Wizard will install USB 54M Wireless LAN Driver and Utility on your computer. To continue, click Next.
< Back
Next >
Cancel

Figure 3-2

- Follow the Install Shield Wizard steps and click "Finish" when done.

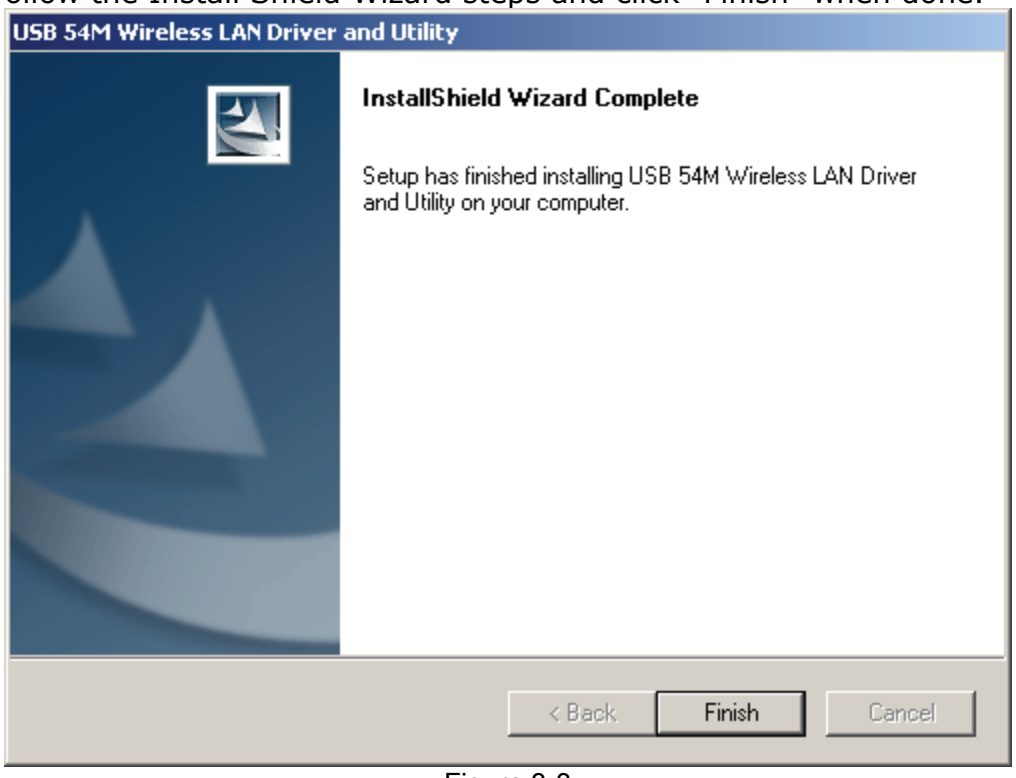
USB 54M Wireless LAN Driver and Utility
InstallShield Wizard Complete
Setup has finished installing USB 54M Wireless LAN Driver and Utility on your computer.
< Back
Finish
Cancel

Figure 3-3

- Now restart your PC or notebook.

3.2 Install Adapter

- Power on your PC, let the operating system boot up completely and log in as needed.
- Hold the adapter and insert it into a USB slot.

Figure 3-4

You have now completed the driver and hardware installation for the Adapter.

3.3 Configuration your wireless adapter

- The Wireless LAN Utility screen will appear automatically.

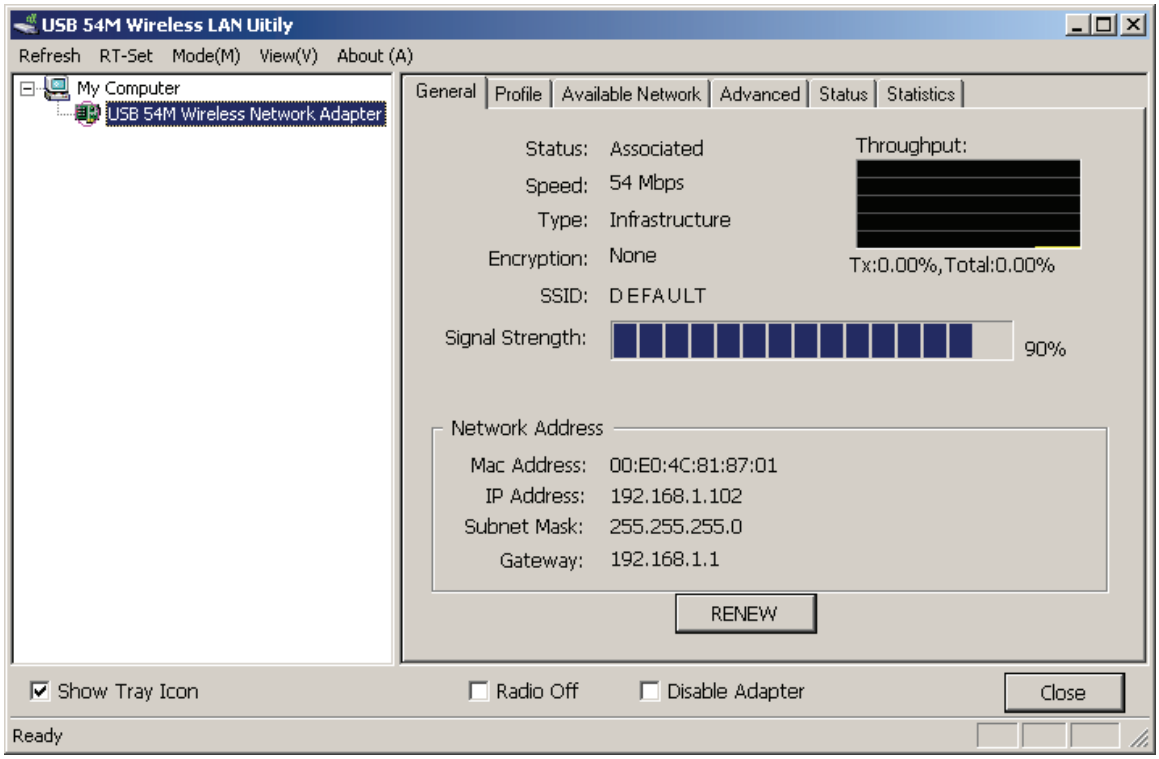

Figure 3-5

- Click the "Available Network" tab then click the Refresh button to search for available wireless networks.

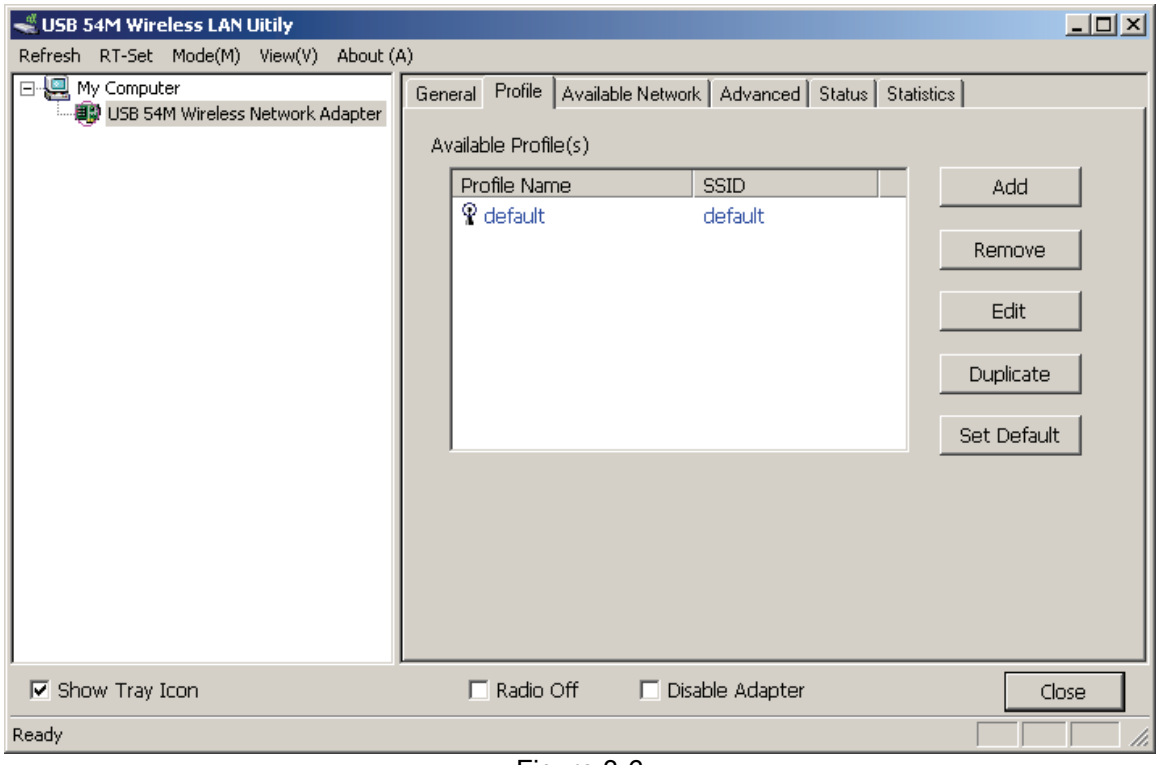

Figure 3-6

- To connect to one of the networks on the list, select the wireless network, and click "Add to Profile" button.

Chapter 4 Using the Wireless Client Configuration Utility

Use the Wireless Client Configuration Utility to check the link information, search for available wireless networks, or create profiles that hold different configuration settings. You can double-click the icon on your system desktop start it.
If you are using Windows XP, you can use either the Zero Configuration Utility or the Wireless Client Configuration.

4.1 Network Status

The Network Status tab displays signal strength and link information, Internet Protocol (TCP/IP).

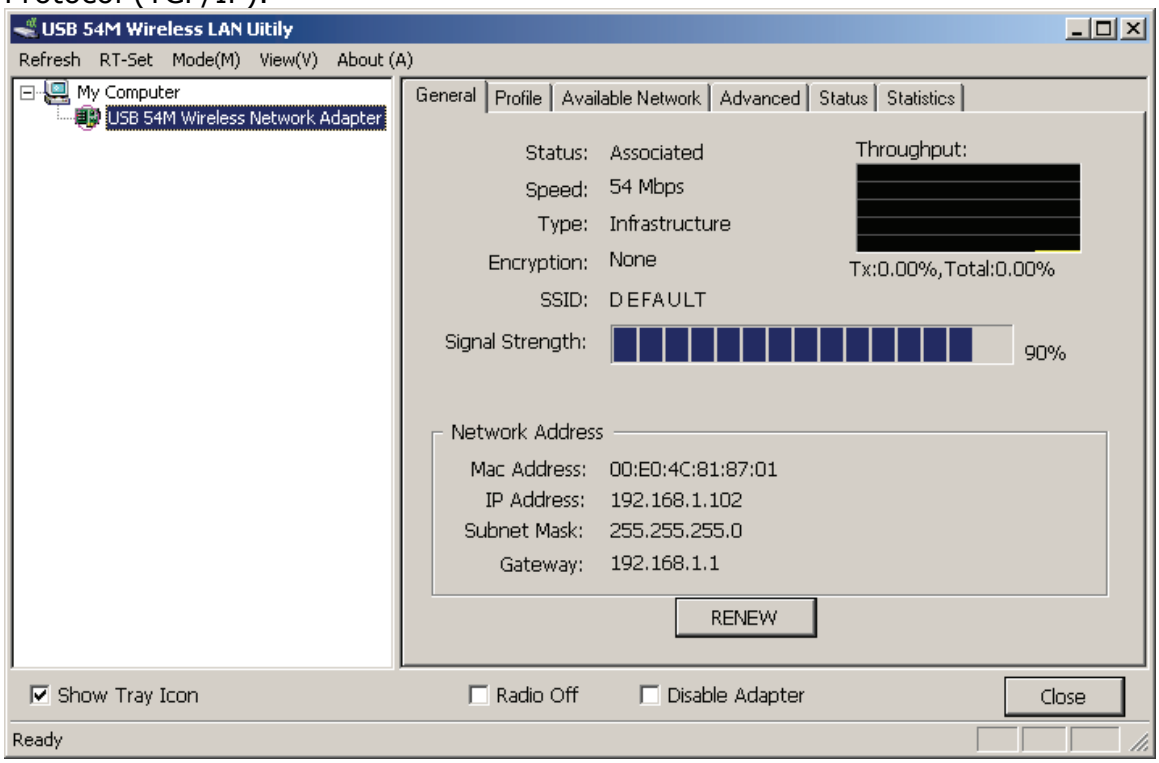

Figure 4-1

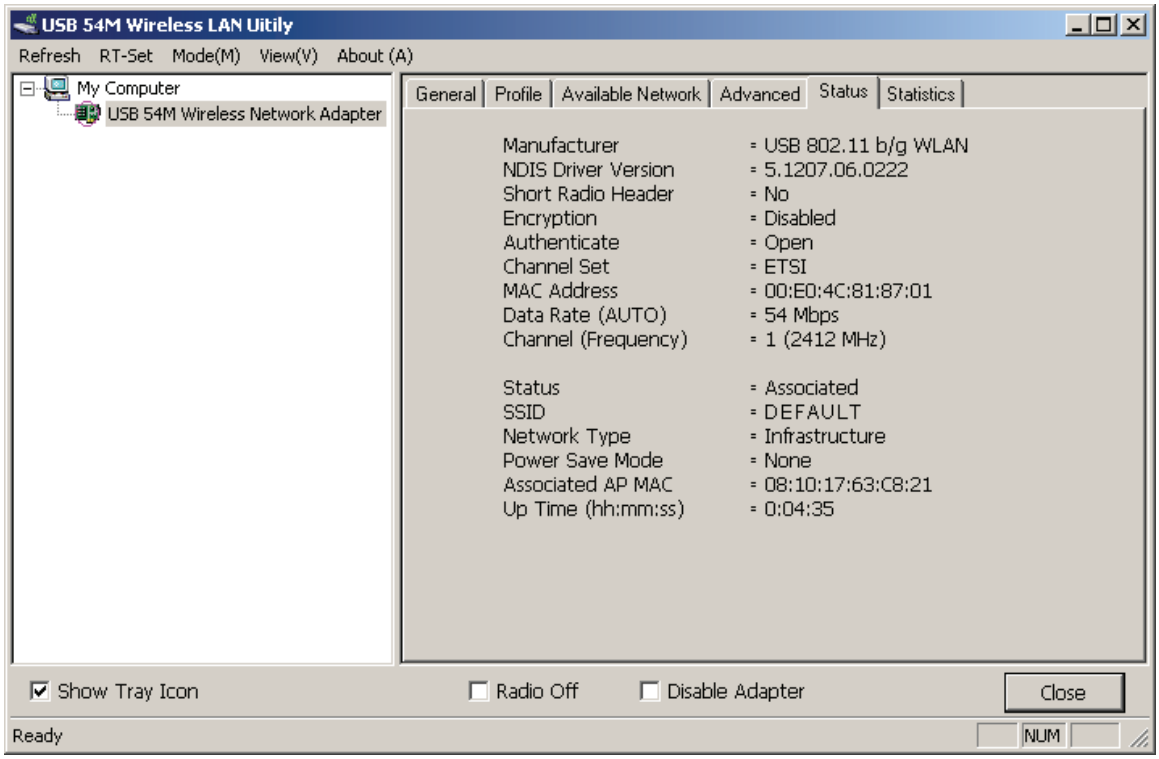

Figure 4-2

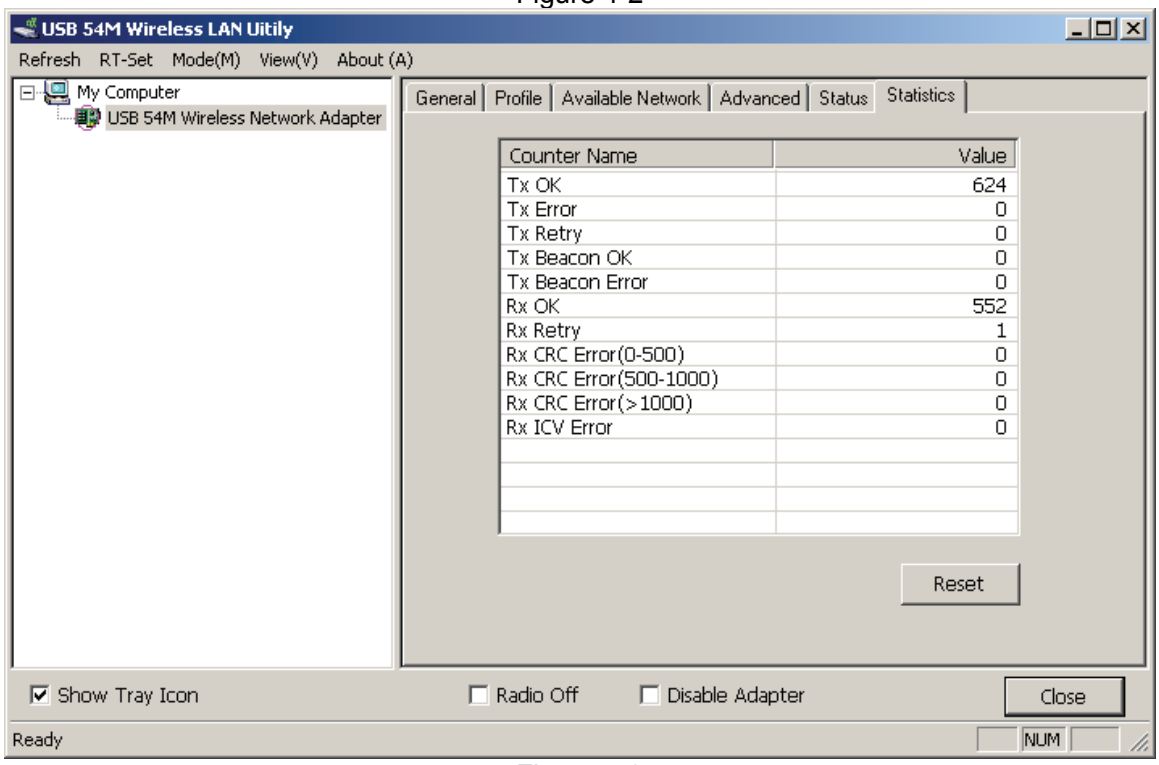

Figure 4-3

Status: The status of the wireless network connection.

- SSID: The unique name of the wireless network.
- Type: The mode of the wireless network currently in use.

- BSSID: The MAC address of the wireless network's access point.
- Security: The status of the encryption security feature.
- Speed: The data transfer rate of the current connection.
- Channel: The channel to which the wireless network devices are set.
- IP Address: The IP Address of the Adapter.
- Subnet Mask: The Subnet Mask of the Adapter.
- Default Gateway: The Default Gateway address of the Adapter.
- RX: Data, error or retry of RX
- TX: Data, error or retry of TX

4.2 Profile and Available Network

The Profile and Available Network tab, displays a list of infrastructure and ad-hoc networks available for connection.

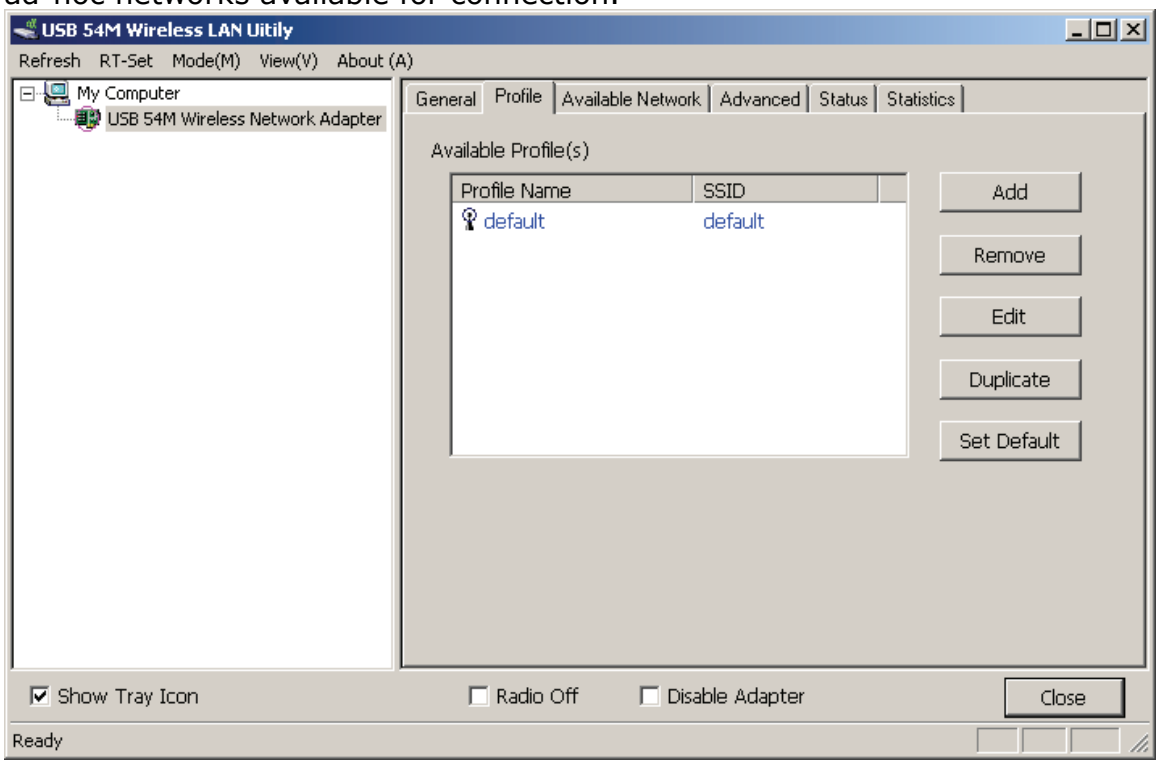

Figure 4-4

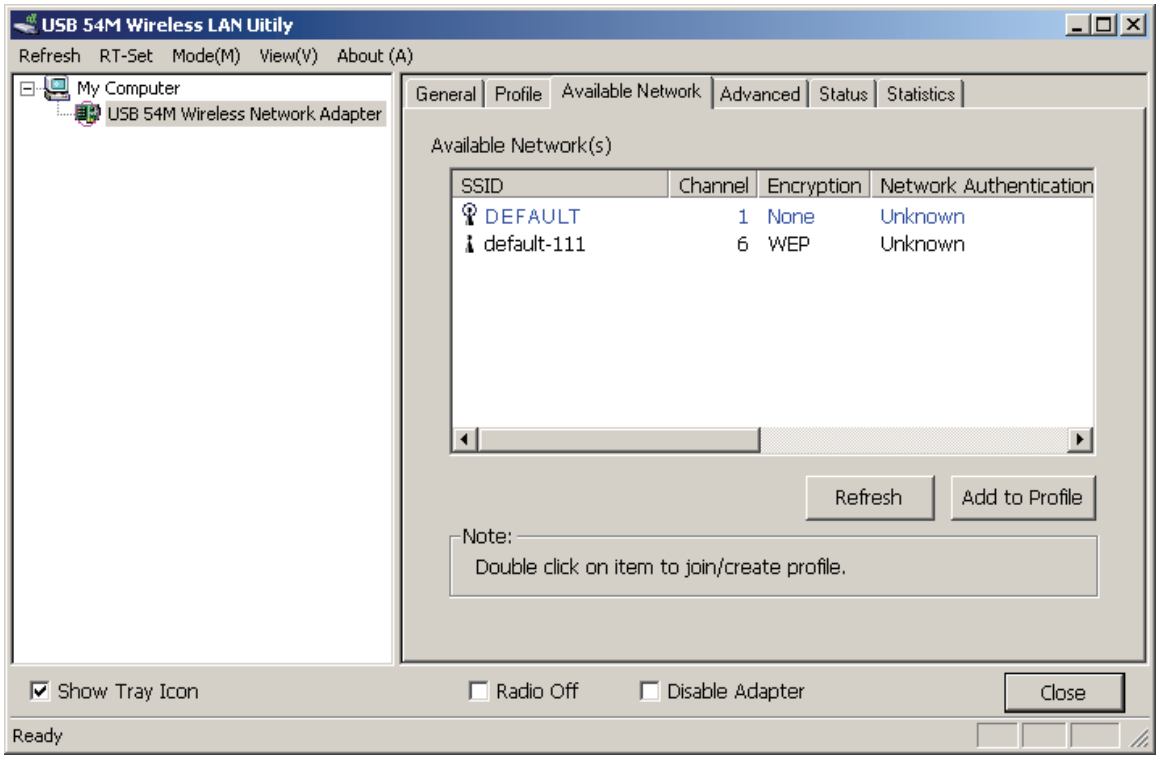

Figure 4-5

The section of the window displays the Available Networks. Highlight the network to which you wish to connect. Click on the "Add to Profile" button.

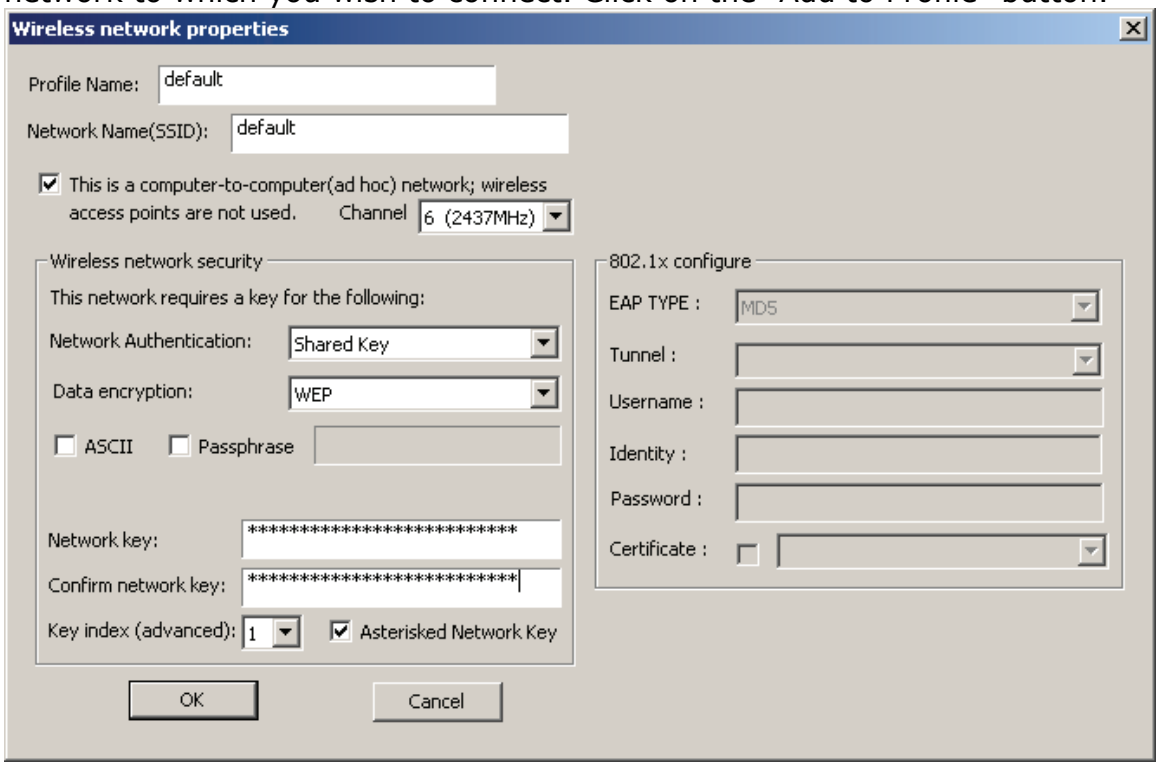

Figure 4-6

Choose the Authorization modes and Encryption modes in the drop-down box. If the wireless network uses a Passphrase, enter the Passphrase in the

Passphrase field. If the wireless network uses a WEP key, enter the WEP key in the Key field.
Click the "OK" button to complete the network connection and return to the Site Survey screen, or click the Cancel button the cancel the network connection and return to the Site Survey screen.

4.3 Advanced

The Advanced tab screen lets you setup some advanced information of the Wireless Adapter.

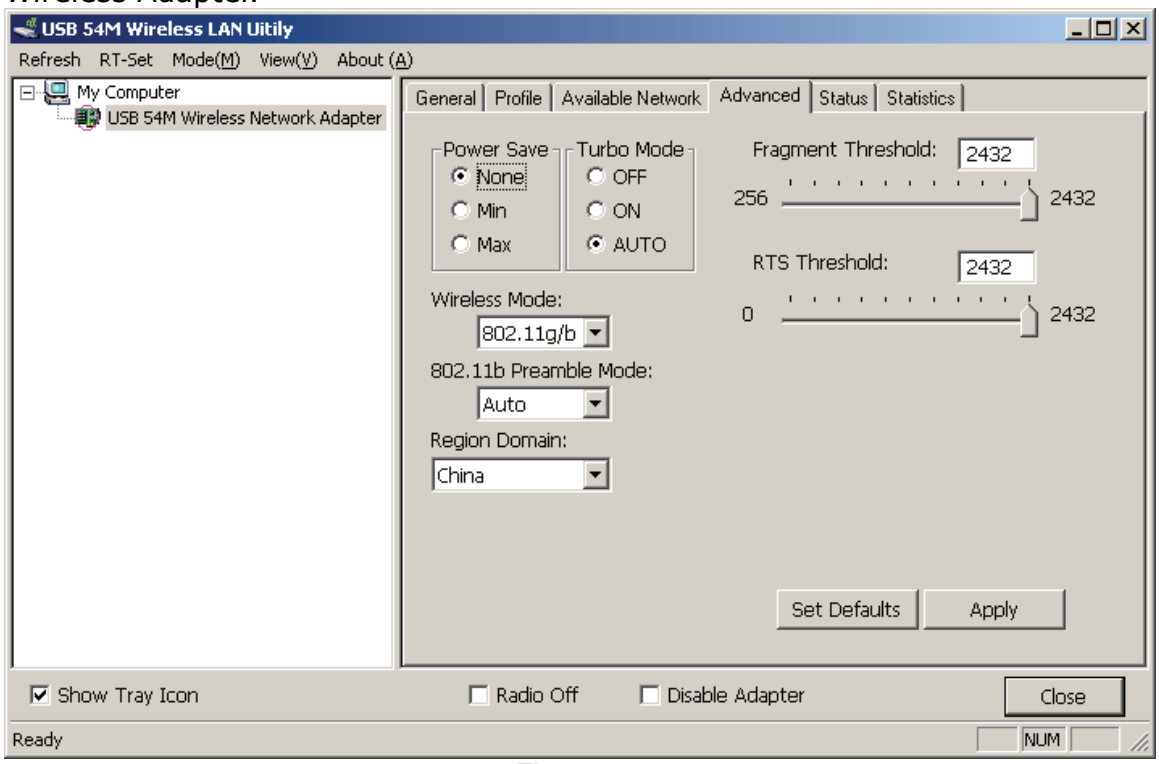

Figure 4-7

4.4 Mode

- On the "RT-Set" or "Mode" tab, click "next" button to select one of these: Station (infrastructure), Station (ad hoc), AP.

RT-Set
Select Operation Mode:
Choose work in AP or Station Mode.
Station (infrastructure): Connect to a wireless network through the AP.
Station (ad hoc): Connect to computer-to-computer network.
AP: Setup a wireless network.
Next >
Cacnel

Figure 4-8

- Choose a mode and click the "Next" button.

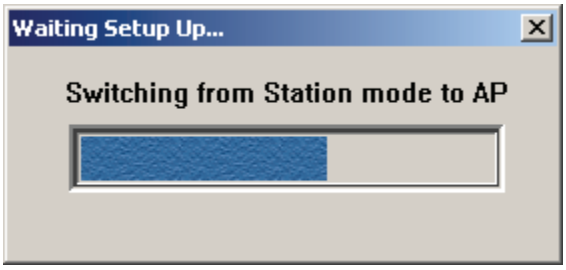

Figure 4-9

The Security screen will appear. Choose the Authentication Mode and Encryption Method from the drop-down menu. To use WEP encryption (recommended to increase network security), select 64 bits or 128 bits WEP from the drop-down menu, and enter either a Passphrase or WEP key. Then click Next button.

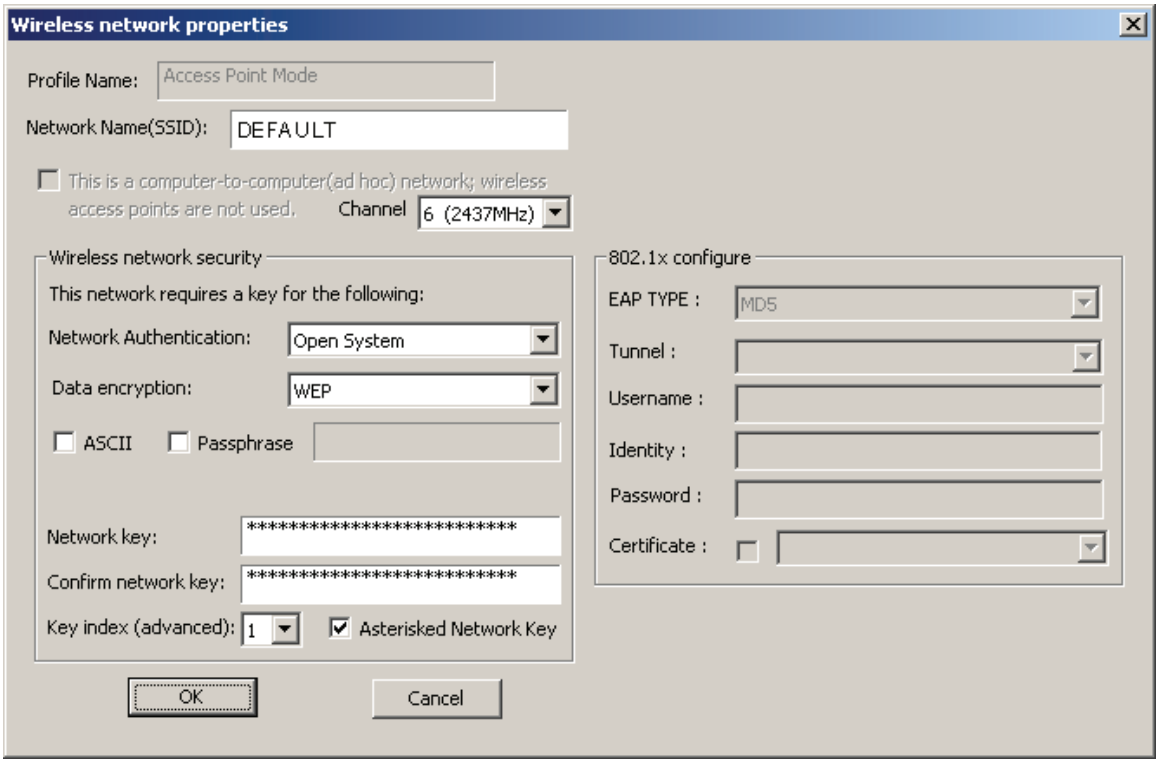

Figure 4-10

- The Protocol screen will appear. Select do not change settings, then, click Next button.
- The Complete Screen will appear. Click Finish button.

You have successfully created a connection profile.

Chapter 5 Troubleshooting

This chapter provides solutions to problems that may occur during the installation and operation of the Wireless USB Adapter. Read the descriptions below to solve your problems.

1. The Wireless USB Adapter does not work properly.

Reinsert the Wireless USB Adapter into your PC's USB slot.

Right click on My Computer and select Properties. Select the device manager and click on the Network Adapter. You will find the Adapter if it is installed successfully. If you see the yellow exclamation mark, the resources are conflicting. You will see the status of the Adapter. If there is a yellow question mark, please check the following:

Make sure that your PC has a free IRQ (Interrupt ReQuest, a hardware interrupt on a PC.)

Make sure that you have inserted the right adapter and installed the proper

driver. If the Adapter does not function after attempting the above steps, remove the adapter and do the following:

Uninstall the driver software from your PC.

Restart your PC and repeat the hardware and software installation as specified in this User Guide.

2. I cannot communicate with the other computers linked via Ethernet in the Infrastructure configuration.

Make sure that the PC to which the Adapter is associated is powered on.

Make sure that your Adapter is configured on the same channel and with the same security options as with the other computers in the Infrastructure configuration.

3. What should I do when the computer with the Adapter installed is unable to connect to the wireless network and/or the Internet?

Check that the LED indicators for the broadband modem are indicating normal activity. If not, there may be a problem with the broadband connection.

Check that the LED indicators on the wireless router are functioning properly. If not, check that the AC power and Ethernet cables are firmly connected.

Check that the IP address, subnet mask, gateway, and DNS settings are correctly entered for the network.

In Infrastructure mode, make sure the same Service Set Identifier (SSID) is specified on the settings for the wireless clients and access points.

In Ad-Hoc mode, both wireless clients will need to have the same SSID. Please note that it might be necessary to set up one client to establish a BSS (Basic Service Set) and wait briefly before setting up other clients. This prevents several clients from trying to establish a BSS at the same time, which can result in multiple singular BSS being established, rather than a single BSS with multiple clients associated to it.

Check that the Network Connection for the wireless client is configured properly.

If Security is enabled, make sure that the correct encryption keys are entered on both the Adapter and the access point.

APPENDIX A Specifications

Standards: IEEE 802.11g, IEEE 802.11b

Modulation: 802.11b: CCK (11 Mbps), DQPSK (2 Mbps), DBPSK (1Mbps);
802.11g: OFDM

Channels:

11 Channels (USA)

13 Channels (Europe)

Network Protocol: TCP/IP, IPX, NDIS 4, NDIS 5, NDIS 5.1, NetBEUI

Interface: USB

Transmit Power: 15 dBm

Sensitivity: -80 dBm

LED: PWR, LNK/ACT

WEP Key Bits: 64-Bit and 128-Bit

Dimensions: 85.5×28×10mm

Unit Weight: 15g

Power: 5V

Certifications: FCC CE

Operating Temp.: 0ºC to 40ºC

Storage Temp.: -20ºC to 70º C

Operating Humidity: 10% to 85%, Non-Condensing

Storage Humidity: 5% to 90%, Non-Condensing

FCC Compliance Statement

CAUTION: Any changes or modifications in construction of this device which are not expressly approved the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications, however, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

CE Mark Warning:

This is Class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.